

coverage, while considered to some extent, would still be very confusing to a novice who did not happen to live in the Northeast. The ink sketches of birds, while sometimes crude, yet manage to capture enough of the species' personality that they could be very helpful. I would have preferred that more of them be used, and the descriptive matter not attempted at all. The good appended bibliography of other published material (a glaring typographical error cites Forbush and May: "*National*" *History of the Birds* . . .), should lead readers to adequate sources when they are ready to extend their knowledge of birds. It would be surprising if this book did not encourage a great many to do so. —William A. Lunk.

PRESERVE OR PLAYGROUND?

Within the last few generations, governments in the United States and Canada have created many public parks for the purpose of preserving areas of natural beauty and of particular floral and faunal significance. These have been enthusiastically accepted by the public which, encouraged by travel publicity, now throngs to such areas in ever-increasing numbers. Indeed, in some of our smaller parks, it now seems likely that the public, by sheer weight of numbers, is threatening to destroy some of the very things the parks were intended to preserve.

Consider, in microcosm, the example of Point Pelee National Park, Ontario, Canada. From the north shore of the western end of Lake Erie, Point Pelee extends southward for some nine miles in the form of a gracefully symmetrical isosceles triangle. Long sand dunes form the two sides of this attenuated triangle, and much of the interior is, or was, marsh land. About three miles from the end of the point, the marsh gives way to sandy soil able to support tall hardwoods. As the soil becomes thinner, red cedars are more prominent. Alongside the beaches and near the terminal sandbar, the vegetation becomes a tangle of shrubs and vines. The eastern sand dune is much less luxuriantly vegetated than the western one, particularly where it borders the marsh.

Point Pelee has long been of interest and concern to the Wilson Ornithological Club. In the early part of this century, members of the club from both Canada and the United States made many visits to study its natural history. Their ornithological findings were published at length in *The Wilson Bulletin* (Taverner and Swales, 1907-1908: No. 59, pp. 37-54; No. 60, pp. 82-89; No. 61, pp. 133-153; No. 63, pp. 79-96; No. 64, pp. 107-124; Wood, 1910, 22:63-78).

It was, in fact, a member of the club, the late Mr. P. A. Taverner, who, in his official capacity with the Geological Survey of Canada, drew up the original recommendation that the area be made a national park. The reasons for doing so were: (1) the point was an area of natural beauty which should be preserved; (2) as the southernmost part of the mainland of Canada, it supported a wide variety of Carolinian forms of flora and fauna not found elsewhere in Canada; (3) the large marsh on the point was one of the few waterfowl breeding-grounds of importance remaining in southern Ontario; (4) the area was a focal point on one of the most important migration highways in America, where almost incredible numbers of small migrant birds gathered in spring and fall.

In due course this recommendation took effect and, in 1918, Point Pelee National Park came into being by Order-in-Council. The park so formed comprises slightly more than six square miles of the more terminal portion of the point. In deference to local opinion and established custom, the government did not acquire private property existing within the limits of the newly formed park. This concession was contrary to the original recommendation made by Mr. Taverner, and the problems arising from these private holdings have increased rather than diminished.

In the period between the two wars, naturalists derived immense pleasure and satisfaction from studying the unique flora and fauna of the park, and from watching the pageant of migration each spring and fall. The foresight of Mr. Taverner and his associates had served to preserve all four important features of the point.

In the late 1930's, however, there were indications that the trend of civilization threatened to upset this satisfactory state of affairs. Improved highways and automobiles brought the park within a few hours' drive of the increasingly crowded cities adjacent to Lake Erie, and of a host of smaller towns in southern Ontario and nearby states. Simultaneously, more and more water frontage on Lake Erie was being withdrawn from public usage. The fame of the park's beaches and natural beauty spread rapidly. Several owners of property within the park subdivided their land for summer cottagers. The number of visitors to the park rose first to a gratifying, and then to an alarmingly high level. The physical impact of so many visitors began to make itself evident in the wooded portions of the park.

In 1939, Dr. Harrison F. Lewis, Chief of the Canadian Wildlife Service, and a member of this club, played a prominent part in an on-the-spot investigation. As a result, a block of the finest part of the original forest cover was enclosed by a fence to form a wilderness preserve which the public was not permitted to enter. The problem was then further deferred by the Second World War which, with its attendant travel restrictions and gasoline rationing, reduced the number of visitors to the park to a small fraction of what it had been.

Since the end of the war, all those forces making for a greater number of visitors have sharply intensified. This is clearly shown by the following figures for visitors in the six-month period from April to September: 1946, 74,000; 1948, 120,000; 1950, 207,000. In 1950, this meant an average of 1,100 visitors per day, over a period of six months. The peak figure for one day is in excess of 17,000 persons!

These people must be accommodated in an area of six square miles. Yet even this by no means presents the true picture. Nearly five of these square miles are marsh land. The fenced preserve takes a not inconsequential portion of the remainder. Thus the public is confined chiefly to the road margins, the western sand dunes, and the terminal portion of the point.

The physical impact of 200,000 people in an area of little more than a square mile must necessarily have a pronounced effect on the vegetation and wildlife of that area. How does this affect the purposes for which the park was established? The one most vitally affected concerns the migratory birds. The funnel-like shape of the point seems to have the effect of causing them to accumulate near the end of the point in immense numbers. Consequently, they require a correspondingly large amount of food and shelter. Under natural conditions these exist there. But with the advent of so many human visitors, also drawn as by a magnet to the end of the point, there have been considerable changes: the establishment of a large parking area, the removal of ground cover to form clearings, the removal of the understory beneath trees for convenience of picnickers, and some removal of trees and shrubs along the shoreline. The search for firewood has brought about the disappearance of old stumps, logs, and parts of living trees. There are even swings and a merry-go-round.

The trend is thus towards clearings instead of tangles, wind-blown space beneath the trees instead of undergrowth providing food and shelter. Less and less soil-forming material accumulates where it is needed to bind the sand and deter erosion by wind and water.

Inevitably, those who must administer the park are in a most difficult position. They are fully aware of the original ideas behind the creation of the park. They also know that the park is attracting 200,000 visitors a year, many of whom come primarily to swim, picnic, play ball, and enjoy community games. These people are not reluctant to voice their opinion that the recreational facilities are still largely inadequate, and they naturally receive support from among local business people to whom this influx forms a most welcome bonanza. Since it is, after all, a public park, they say, cannot more consideration be given to the comfort and requirements of the people who visit it? Should the welfare of the birds be safeguarded to the exclusion of the welfare of the people?

The answer to this question would never be final, yet it is frequently asked when nature and civilization come into conflict. We believe that the welfare of both man and bird can be safeguarded by careful planning. Public recreational areas are a primary need if people are to be able to enjoy their increasing leisure time. It is important, however, not to confuse the provision of recreational areas with the preservation of natural areas. They are requirements that can well exist side by side, but neither will function as both for very long.

In this instance, the migrant birds require a relatively undisturbed natural area, particularly at the end of the point. To them, Point Pelee is one very small but very important place where they gather from many regions for a brief but critical part of their lives. The number of suitable natural areas available to them as stop-over points has steadily declined. Point Pelee's importance to migrants is thus very great in relation to its size, and every acre assumes a tremendous significance. It would be virtually impossible to set up successfully alternate facilities for them elsewhere.

On the other hand, human requirements here are less complicated and more amenable to direction. Visitors who are sincerely interested in conservation and natural history should provide no problem either by their actions or by their numbers—let them be made welcome at the park by all means. The problem thus resolves itself into one of providing more adequate facilities for visitors interested primarily in other forms of recreation. Perhaps such facilities could be furnished in an attractive form to the north of the present park boundary. Failing this, we ask the National Parks Service if it would not be possible to acquire for this purpose some of the private holdings now existing within the more northern part of the park, and now being used as sites for the less attractive types of summer cottages. As a last resort, we would even be in favor of opening up the northern part of the east beach to the public. Any of these measures would assist in de-emphasizing the end of the point, much of which could then be permitted to return to natural cover.

With particular regard to Point Pelee National Park, there are also certain specific things which you, as a club member, can do if you wish. First, we suggest that, if you have not already visited the park in migration time, you owe it to yourself as an ornithologist to do so, even if only as a precaution, lest change should mar its future effectiveness. Second, for those who do visit it, we suggest that you look up the superintendent or his assistant, and let him know that you are visiting the park *as a naturalist*. Naturalists form a relatively small minority of all visitors, but their interests are catered to and it is well that they should pay their respects in order that the minority may not seem smaller than it actually is. Third, if you wish to express your impressions as to the value of the park as a preserve, we feel certain that your letters will receive courteous consideration from either the National Parks Service or the Canadian Wildlife Service, in Ottawa. There are sufficient members from this club who visit the park regularly to provide an impressive cross-section of ornithologists' viewpoints.

Finally, we make bold to hold out one further suggestion to the National Parks Service and the Canadian Wildlife Service. This involves the installation of a park naturalist. We know that park naturalists are being established in national parks in Canada as funds become available. But we suspect that, because of its small size, Point Pelee ranks far down on that list. We respectfully suggest that Point Pelee should be considered primarily from the viewpoint of the number of visitors it has. On that basis, the park is surely one of the most fertile spots on the continent for public education in natural history and the value of conservation. Let us have a park naturalist there *soon*, to demonstrate to visitors the reasons why the park was established, and to safeguard its wildlife resources. — WILLIAM W. H. GUNN AND HENRY S. MOSBY.

GRADUATE RESEARCH IN ORNITHOLOGY

The compilation of ornithological research in progress by graduate students which was published in *The Wilson Bulletin* in March, 1951 (vol. 63:62—64) was considered to be of value to enough readers that the Editor has asked us to repeat it. Inquiries were sent to some 40 American and Canadian universities where we thought there *might* be graduate students conducting their thesis investigations on ornithological topics.

The list should not be considered complete, however. Despite our care, we may have failed to reach all institutions, and a number did not respond. Furthermore, some limitations were imposed to keep the list within bounds. Studies concerned with the management, life histories, or ecology of game birds are not included here because they are noted elsewhere. *The Wildlife Review* lists such theses upon completion if the titles are filed with the Editor, Neil Hotchkiss, Patuxent Research Refuge, Laurel, Maryland. In June 1951, the Fish and Wildlife Service issued a list of current ornithological investigations at the 15 Cooperative Wildlife Research Units. This may be secured from the Service upon request.

Persons contacted were asked to list only those thesis investigations which were in progress during the fall of 1951, when the inquiry was made, and to indicate the degree for which the student was a candidate. Readers noting omissions are asked to notify us.

California, University of

Bowers, Darl (Ph.D.)—Correlation of color differentiation in Wren-tits with light factors in chaparral environment.

Bowman, Robert I. (Ph.D.)—Skeletal and muscular anatomy and adaptations of Galapagos finches.

Childs, Henry E. (Ph.D.)—Population studies of the Brown Towhee (*Pipilo fuscus*).

Cogswell, Howard L. (Ph.D.)—Size of territory in chaparral birds in relation to vegetation.

Dixon, Keith L. (Ph.D.)—Comparative ecology and behavior of sympatric and hybridizing species of titmice.

Johnston, David (Ph.D.)—Gonad cycle and histology in immatures and adults of the California Gull.

Norris, Robert A. (Ph.D.)—A comparative study of the biology of the nuthatches *Sitta pygmaea* and *Sitta pusilla*.

Richards, Lawrence P. (Ph.D.)—Morphologic adaptations in the drepaniids of Hawaii.

Cornell, University of

Dilger, William C. (Ph.D.)—A study of the thrushes of the genus *Hylocichla*.

Fischer, Richard B. (Ph.D.)—Life history of the Chimney Swift (*Chaetura pelagica*).